

In the Claims:

1. (Currently Amendment) A lithography system for processing a substrate comprising:
a projection optics chamber, a vacuum mask chamber, and one or more vacuum valves
disposed between the projection optics chamber and the vacuum mask chamber for isolating the
mask chamber from the projection optics chamber;
a chuck mounted in the vacuum mask chamber for holding a mask;
a gas supply line adapted to provide an inert gas ~~or nitrogen~~ to the vacuum mask chamber
~~for dechucking the mask in the vacuum mask chamber; and~~
a vacuum pump adapted to evacuate the mask chamber; and
wherein the projection optics chamber is connected to a supply of gas only through the
one or more vacuum valves.
2. (Previously Presented) The lithography system of claim 1 wherein the one or more vacuum valves are closed to isolate the vacuum mask chamber from the rest of the lithography system before venting the vacuum mask chamber with the inert gas or nitrogen provided by the gas supply line.
3. (Original) The lithography system of claim 1 wherein the inert gas is nitrogen.
4. (Previously Presented) The lithography system of claim 1 wherein the lithography system in an extreme ultraviolet system.
5. (Previously Presented) The lithography system of claim 1 wherein the chuck further comprises:
a contact surface for holding a back surface of the mask to the chuck; and

a plurality of openings in the chuck, each opening having a first end and a second end, the first end of each opening being coupled to the gas supply line, and the second end of each opening being coupled to the contact surface of the chuck.

6. (Previously Presented) The lithography system of claim 4 wherein the gas supply line provides the inert gas to the contact surface of the chuck and the back surface of the reticle via the plurality of openings in the chuck, for releasing the mask from the chuck.

7. (Original) The lithography system of claim 4 wherein the chuck is an electrostatic chuck.

8. (Withdrawn-Currently Amended) The lithography system of claim 5 further ~~A chuck for holding a reticle during processing, the chuck~~ comprising:

a gas supply line adapted to provide an inert gas to the chuck;

a contact surface for holding a back surface of the reticle to the chuck; and

a plurality of openings in the chuck, each opening having a first end and a second end, the first end of each opening being coupled to the gas supply line, and the second end of each opening being coupled to the contact surface of the chuck.

9. (Withdrawn-Currently Amended) ~~The chuck~~ lithography system of claim 8 wherein the gas supply line provides the inert gas to the contact surface of the chuck and the back surface of the ~~reticle~~ mask via the plurality of openings in the chuck, for releasing the ~~reticle~~ mask from the chuck.

10. (Withdrawn-Currently Amended) ~~The chuck~~ lithography system of claim 8 wherein the inert gas is nitrogen.

11. (Withdrawn-Currently Amended) The ~~chuck~~ lithography system of claim 8 wherein the chuck is mounted in an EUV system.

12-17. (Canceled)

18. (New) The lithography system of claim 1 wherein the gas supply line is adapted for dechucking the mask in the vacuum mask chamber.

19. (New) The lithography system of claim 1 wherein the projection optics chamber comprises a projection optics, and a wafer stage.

20. (New) The lithography system of claim 4 wherein the extreme ultraviolet system uses light of about 10nm to about 15nm.

21. (New) A lithography system comprising:
a mask chamber comprising a chuck for holding a mask;
at least one gas supply line to supply an inert gas to the mask chamber;
a projection optics chamber, wherein the projection optics chamber is connected to a supply of gas only through the mask chamber;
at least one first vacuum pump to evacuate the mask chamber; and
at least one second vacuum pump to evacuate the projection optics chamber.

22. (New) The lithography system of claim 21 further comprising:
at least one vacuum valve disposed between the projection optics chamber and the mask chamber, wherein the projection optics chamber is connected to a supply of gas through the at least one vacuum valve.

23. (New) The lithography system of claim 21 further comprising an extreme ultraviolet lithography system, the extreme ultraviolet lithography system using light of about 10nm to about 15nm.

24. (New) The lithography system of claim 21 wherein the chuck further comprises:

a contact surface for holding a back surface of the mask to the chuck; and

a plurality of openings in the chuck, each opening having a first end and a second end, the first end of each opening being coupled to the at least one gas supply line, and the second end of each opening being coupled to the contact surface of the chuck.

25. (New) An extreme ultraviolet lithography system comprising:

a mask chamber comprising a chuck for holding a mask;

at least one gas supply line to supply an inert gas to the mask chamber;

a projection optics chamber, wherein the projection optics chamber is connected to a supply of gas only through the mask chamber, and wherein the projection optics chamber is not connected to any other supply of gas;

at least one means to remove the inert gas from the mask chamber; and

at least one means to remove the inert gas from the projection optics chamber.

26. (New) The lithography system of claim 25 wherein the lithography system comprises the at least one means to remove the inert gas from the projection optics chamber for operation of the lithography system.